WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:

an image holding member;

a contact-type charger for charging a surface of the image holding member;

an exposure unit for forming an electrostatic latent image by exposing the charged surface of the image holding member;

a developing unit for developing the electrostatic latent image with a spherical toner to obtain a toner image; and

a transfer member for electrostatically transferring the toner image from the surface of the image holding member onto a transfer material,

wherein a number of toner particles remaining on the surface of the image holding member before passing through an abutting portion between the image holding member and the contact-type charger is in a range of 100 to 400 per mm^2.

2. The image forming apparatus of claim 1, wherein the number of toner particles remaining on the surface of the image holding member before passing through the abutting portion between the image holding member and the contact-type charger is in a range of 150 to 350 per mm^2.

3. The image forming apparatus of claim 1, wherein the

number of toner particles remaining on the surface of the image holding member before passing through the abutting portion between the image holding member and the contact-type charger is in a range of 200 to 300 per mm^2.

4. The image forming apparatus of claim 1, wherein a toner shape change rate (Tt) of toner particles remaining on the surface of the image holding member before passing through the abutting portion between the image holding member and the contact-type charger is in a range of 50% to 100%, the toner shape change rate (Tt) being represented by the following equation (1),

Equation (1)

$$Tt(\%) = (h/x) \times 100$$

wherein x represents a maximum length (μm) of a remaining toner particle projected image, h represents a maximum length (μm) of a remaining toner particle projected image formed on a plane perpendicular to an axis of the remaining toner particle projected image in a direction of the maximum length of the remaining toner particle projected image, and $x \geq h$.

5. The image forming apparatus of claim 4, wherein the toner shape change rate (Tt) is in a range of 65% to 100%.

6. The image forming apparatus of claim 4, wherein the toner shape change rate (Tt) is in a range of 80% to 100%.

7. The image forming apparatus of claim 1, wherein a shape factor (SF) of the spherical toner is 135 or less, the shape factor (SF) being represented by the following equation (2)

Equation (2)

$$SF = (2\pi L^2/4A) \times 100$$

wherein L represents a maximum length (μm) of a spherical toner particle projected image, and A represents an area (μm^2) of the spherical toner particle projected image.

8. The image forming apparatus of claim 7, wherein the shape factor (SF) is 125 or less.

9. The image forming apparatus of claim 1, wherein a volume average particle diameter of the spherical toner is in a range of 2 μm to 9 μm.

10. The image forming apparatus of claim 9, wherein the volume average particle diameter is in a range of 5 μm to 8 μm.

11. A process cartridge comprising at least an image holding member and a contact-type charger for charging a surface of the image holding member, wherein a number of toner particles remaining on the surface of the image holding member before passing through an abutting portion between the image holding

member and the contact-type charger is in a range of 100 to 400 per mm^2.

12. The process cartridge of claim 11, wherein a toner shape changing rate (Tt) of toner particles remaining on the surface of the image holding member before passing through the abutting portion between the image holding member and the contact-type charger is in a range of 50% to 100%, the toner shape changing rate (Tt) being represented by the following equation (1),

Equation (1)

$$Tt(\%) = (h/x) \times 100$$

wherein x represents a maximum length (μm) of a remaining toner particle projected image, h represents a maximum length (μm) of a remaining toner particle projected image formed on a plane perpendicular to an axis of the remaining toner particle projected image in a direction of the maximum length of the remaining toner particle projected image, and $x \geq h$.

13. An image forming method comprising the steps of:

charging a surface of an image holding member;

forming an electrostatic latent image by exposing the charged surface of the image holding member;

developing the electrostatic latent image with a spherical toner to obtain a toner image; and

electrostatically transferring the toner image from the

surface of the image holding member onto a transfer material,

wherein a number of toner particles remaining on the surface of the image holding member before passing through an abutting portion between the image holding member and a contact-type charger is in a range of 100 to 400 per mm^2.

14. The image forming method of claim 13, wherein a toner shape change rate (Tt) of toner particles remaining on the surface of the image holding member before passing through the abutting portion between the image holding member and the contact-type charger is in a range of 50% to 100%, the toner shape change rate (Tt) being represented by the following equation (1),

Equation (1)

$$Tt(\%) = (h/x) \times 100$$

wherein x represents a maximum length (μm) of a remaining toner particle projected image, h represents a maximum length (μm) of a remaining toner particle projected image formed on a plane perpendicular to an axis of the remaining toner particle projected image in a direction of the maximum length of the remaining toner particle projected image, and $x \geq h$.

15. The image forming method of claim 13, wherein a shape factor (SF) of the spherical toner is 135 or less, the shape factor (SF) being represented by the following equation (2)

Equation (2)

$$SF = (2\pi L^2/4A) \times 100$$

wherein L represents a maximum length (μm) of a spherical toner particle projected image, and A represents an area (μm^2) of the spherical toner particle projected image.

16. The image forming method of claim 13, wherein a volume average particle diameter of the spherical toner is in a range of 2 μm to 9 μm.